



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB2000-0335

April 9, 2001

Mr. Lawrence C. Evans
Portland District, Corps of Engineers
CENWP-OP-GP (Monical)
P.O. Box 2946
Portland, Oregon 97208-2946

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation, Neskowin Shores-Neskowin Resorts-Proposal Rock Condominiums Revetment Reconstruction Project, Neskowin, Tillamook County, Oregon (Corps No. 2000-00571)

Dear Mr. Evans:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) for the Neskowin Shores-Neskowin Resorts-Proposal Rock Condominiums Revetment Reconstruction Project on Neskowin and Hawk Creeks, Neskowin, Tillamook County, Oregon. NMFS concludes in this Opinion that the proposed action is not likely to jeopardize Oregon Coast coho salmon (*Oncorhynchus kisutch*) or destroy or adversely modify critical habitat. Pursuant to section 7 of the ESA, NMFS has included reasonable and prudent measures with non-discretionary terms and conditions that NMFS believes are necessary and appropriate to minimize the potential for incidental take associated with this project.

This Opinion also serves as consultation on Essential Fish Habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and its implementing regulations (50 CFR Part 600).

Questions regarding this letter should be directed to Rob Markle of my staff in the Oregon State Branch Office at (503) 230-5419.

Sincerely,

For

Donna Darm
Acting Regional Administrator



Endangered Species Act Section 7 Consultation
Biological Opinion
&
Magnuson-Stevens Act
Essential Fish Habitat Consultation

Neskowin Shores-Neskowin Resorts-Proposal Rock Condominiums
Revetment Reconstruction Project, Corps No. 2000-00571
Tillamook County, Oregon

Agency: U.S. Army Corps of Engineers, Portland District

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: April 9, 2001

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TABLE OF CONTENTS

1. BACKGROUND	1
2. PROPOSED ACTION	2
3. BIOLOGICAL INFORMATION AND CRITICAL HABITAT	2
4. EVALUATING PROPOSED ACTIONS	3
4.1. Biological Requirements	4
4.2. Environmental Baseline	4
5. ANALYSIS OF EFFECTS	6
5.1 Effects of Proposed Actions	6
5.2 Effects on Critical Habitat	7
5.3 Cumulative Effects	8
6. CONCLUSION	8
7. CONSERVATION RECOMMENDATIONS	8
8. REINITIATION OF CONSULTATION	9
9. INCIDENTAL TAKE STATEMENT	9
9.1 Amount or Extent of Take	9
9.2 Reasonable and Prudent Measures	10
9.3 Terms and Conditions	10
10. ESSENTIAL FISH HABITAT CONSULTATION	14
10.1 Introduction	14
10.2 Magnuson-Stevens Fishery Conservation and Management Act	14
10.3 Identification of Essential Fish Habitat	15
10.4 Proposed Actions	15
10.5 Effects of the Proposed Action	15
10.6 Conclusion	16
10.7 EFH Conservation Recommendations	16
10.8 Statutory Requirements	16
10.9 Consultation Renewal	16
11. LITERATURE CITED	17

1. BACKGROUND

In a letter dated October 18, 2000, the U.S. Army Corps of Engineers (Corps) requested informal consultation on the issuance of a permit under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act authorizing a proposed 495-foot revetment reconstruction action at the Neskowin Creek and Hawk Creek confluence. The National Marine Fisheries Service (NMFS) received the request for consultation and a biological assessment describing the proposed action on October 23, 2000. The Corps and NMFS conducted a joint site visit on November 21, 2000. At the site visit, the Corps and NMFS agreed to pursue formal consultation and requested additional information from the applicants. On March 9, 2001, NMFS considered the information sufficient to complete consultation. The Neskowin Shores, Neskowin Resorts, and Proposal Rock Condominiums are the joint-applicants for the subject permit.

The Neskowin Creek/Hawk Creek confluence experiences tidal inundation. Discharge flows directly from the confluence several hundred yards across the beach to the Pacific Ocean. The three resorts are situated between the creeks on fill material. The embankment was originally protected by end-dumped rock. During the 30 years since construction, willows, beach grasses, and salt-marsh vegetation had colonized the embankment. In recent years, storm-wave action has destabilized and redistributed the rock. Failure is attributed to sub-sizing of the rock and the absence of a toe trench to key the rock into the substrate. Currently, the affected bankline appears relatively stable, but continued loss threatens the residential structures on-site. The top of bank is manicured lawn. Along the mid-section bank length, some remnant willows exist on the bank face and salt-marsh grasses are present at the toe of slope. No trees are present on site. A well defined estuary does not exist. The creeks discharge directly to the ocean. The Neskowin Creek's opposite bank appears well vegetated. In the 1960's, the Neskowin Creek reach immediately upstream from the project site was moved from its natural channel and riprapped to accommodate Highway 101 (Boateng and Assoc. 1999). The opposite bank of Hawk Creek has been extensively riprapped by the Oregon Department of State Parks to protect their property. The opposing hardened banks on Hawk Creek appear to exacerbate erosion effects on site by providing an artificially narrow channel that functions to constrict incoming storm waves preventing natural energy dissipation. A dynamic nature channel would likely have provided better energy dissipation over a broad, low-bank tidal floodplain.

This biological opinion (Opinion) considers the potential effects of the proposed action on Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*), which occur in the proposed project area. OC coho salmon were listed as threatened under the Endangered Species Act (ESA) on August 10, 1998 (63 FR 42587), critical habitat was designated on February 16, 2000 (65 FR 7764) and protective regulations were issued on July 10, 2000 (65 FR 42422). The objective of this Opinion is to determine whether the proposed action is likely to jeopardize the continued existence of OC coho salmon, or destroy or adversely modify designated critical habitat for this species. This consultation is conducted pursuant to section 7(a)(2) of the ESA and section 305(b) of the Magnuson-Stevens Act and the their implementing regulations, 50 CFR Part 402 and 50 CFR Part 600, respectively.

2. PROPOSED ACTION

The applicants propose to place 2,970 cubic yards (cy) of fill material along a 495-foot section of bank. Approximately 225 cy will be placed below the high tide elevation. Banks will be pulled back to no steeper than a 1.5:1 (horizontal:vertical) slope (34°). A three layer embankment is proposed. A 1-foot thick layer of 0.5- to 6-inch crushed rock containing less than 5 percent fines would be placed as bedding material. A 2-foot thick layer of 25- to 150-pound rock would then be placed atop the bedding material. Lastly, a 4-foot thick layer of 100- to 2,700-pound angular rock would face to the embankment. A trench would be excavated at the toe (base) of the existing slope to key in the fill material. The fill (7' thick) would ascend the embankment to the top of bank. While the toe of the mid-section of the embankment is dry during low-tide events, approximately 100 feet of the south end (Neskowin Creek) toe and approximately 125 feet of the north end (Hawk Creek) toe are submerged during all tides. According to the cross-sections provided by the applicants, the fill slope will extend approximately 25 feet horizontal distance back from the toe of slope.

Several remnant willows and patches of beach grass will be removed. Native vegetation will be planted within and above the riprap slope. The face of the slope will be planted with salal (*Gaultheria shallon*) and evergreen huckleberry (*Vaccinium parvifolium*), otherwise known as red huckleberry, on 2.5- to 3-foot centers. Soil will be placed within interstitial spaces of rock face from top of slope to mean high-high tide elevation. Salal will also be planted at the top of bank along the complete length of affected bank. All work is proposed to occur during the summer of 2001 (July 1-September 15).

A temporary bridge will be constructed from the foot of Carlton Street across Hawk Creek to the Proposal Rock Condominiums to provide access. The bridge will be supported by four concrete blocks (3' x 2' x 10'). Two blocks will be placed above the high tide line on either side of the creek and two will be placed in the creek. No excavation will be required to seat the bridge supports. The bridge will be removed upon completion of the project.

3. BIOLOGICAL INFORMATION AND CRITICAL HABITAT

Although there are currently limited data to assess population numbers or trends, NMFS believes that all coho salmon stocks comprising the OC coho salmon Evolutionarily Significant Unit (ESU) are depressed relative to past abundance. The status and relevant biological information concerning OC coho salmon are well described in the proposed and final rules from the Federal Register (July 25, 1995, 60 FR 38011; and May 6, 1997, 62 FR 24588, respectively), and Weitkamp *et al.* (1995).

Abundance of wild coho salmon spawners in Oregon coastal streams declined during the period from about 1965 to roughly 1975 and has fluctuated at a low level since that time (Nickelson *et al.* 1992). Spawning escapements for this ESU may be at less than 5 percent of abundance from that in the early 1900s. Contemporary production of coho salmon may be less than 10 percent of the historic production (Nickelson *et al.* 1992). Average spawner abundance has been relatively constant since the late 1970s, but preharvest abundance has declined. Average recruits-per-spawner may also be declining. The OC coho salmon ESU, although not at immediate danger of extinction, may become endangered in the future if present trends continue (Weitkamp *et al.* 1995). Coho salmon returns in fall

2000 were hampered by low flows in coastal basin systems, which limited access to upstream spawning grounds. The native coho salmon population in the Neskowin Basin, including Hawk Creek, is depressed in comparison with historic levels. ODFW estimates coho salmon populations are approximately 10 percent of their historic levels, and averaged 118 adults from 1990 to 1997 (Boateng and Assoc. 1999). Redd counts in the basin are typically less than ten redds. Hatchery releases from the Salmon River Fish Hatchery during the past century may have impacted the genetics of the native Neskowin stock (Boateng and Assoc. 1999).

Timing of adult coho salmon river entry is largely influenced by river flow. Coho salmon normally wait for freshets before entering rivers. In the Neskowin and Hawk Creek watersheds, adults return between October and January (C. Knutsen, ODFW, personal communication via e-mail with R. Markle, 29 November 2000). Juvenile coho salmon rear for one year in fresh water before migrating to the ocean. Juvenile OC coho salmon migrate out of the subject basins as smolts between April and June (C. Knutsen, ODFW, personal communication via e-mail with R. Markle, 29 November 2000). Based on the timing in the neighboring Nestucca and Salmon Rivers, peak outmigration is believed to occur in late-April or early-May (Weitkamp *et al.* 1995).

Critical habitat for OC coho salmon includes Oregon coastal river basins (freshwater and estuarine areas) between Cape Blanco and the Columbia River. Freshwater critical habitat includes all waterways, substrates, and adjacent riparian areas—areas adjacent to a stream that provides the following functions: shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter—below longstanding, natural impassable barriers (i.e., natural waterfalls in existence for at least several hundred years) and several dams that block access to former coho salmon habitat. The proposed action would occur in designated critical habitat for OC coho salmon.

4. EVALUATING PROPOSED ACTIONS

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). In conducting analyses of habitat-altering actions under section 7 of the ESA, NMFS uses the following steps: (1) Consider the status and biological requirements of the species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species; (4) consider cumulative effects; and (5) determine whether the proposed action, in light of the above factors, is likely to appreciably reduce the likelihood of species survival in the wild or adversely modify its critical habitat. In completing this step of the analysis, NMFS determines whether the action under consultation, together with all cumulative effects when added to the environmental baseline, is likely to jeopardize the continued existence of the listed species or result in destruction, adversely modify their critical habitat, or both. If NMFS finds that the action is likely to jeopardize the listed species, NMFS must identify reasonable and prudent alternatives for the action.

4.1. Biological Requirements

The first step in the methods NMFS uses for applying the ESA section 7(a)(2) to listed salmon is to define the biological requirements of the species most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list OC coho salmon for ESA protection and also considers new data available that are relevant to the determination (Weitkamp *et al.* 1995).

The relevant biological requirements are those necessary for OC coho salmon to survive and recover to naturally reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful rearing and migration. The current status of the OC coho salmon, based upon their risk of extinction, has not significantly improved since the species was listed and, in some cases, their status may have worsened.

4.2. Environmental Baseline

The environmental baseline is an analysis of the effects of past and on-going human and natural factors leading to the current status of the species or its habitat and ecosystem within the action area. The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). Direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed where actions described in this Opinion lead to additional activities or affect ecological functions contributing to stream degradation. The action area is defined as that bankline, adjacent riparian zone, and aquatic area affected by the proposed action. For this consultation, the action area includes the Neskowin Creek and Hawk Creek from the project site downstream to the Pacific Ocean and upstream approximately 500 feet due to tidal influence.

The Neskowin Creek watershed, including Hawk Creek, is approximately 12 square miles with headwaters on Neskowin Ridge (Boateng and Assoc. 1999). Winters are typified as mild and wet, while summers are cool and relatively dry. Flows as low as 2 cubic feet per second have been known to de-water Neskowin Creek (Boateng and Assoc. 1999). Chum (*Oncorhynchus keta*), fall chinook salmon (*O. tshawytscha*), winter steelhead (*O. mykiss*), cutthroat trout (*O. clarki*), lamprey (*Lampetra* spp.), dace (unidentified), sculpin (unidentified), and smelt (unidentified) are native to the Neskowin Creek basin (Boateng and Assoc. 1999).

The bulk of production for the OC coho salmon ESU is skewed to its southern portion where the coastal lake systems (e.g. Tenmile, Tahkenitch, and Siltcoos Basins) and the Coos and Coquille Rivers are more productive. The proposed action area is located in the northern half of the ESU where production is more depressed and habitat in the action area is underseeded. OC coho salmon spawn in

Neskowin and Hawk Creeks. OC coho salmon habitat use in the project area is primarily migratory and contains no spawning habitat. However, coho salmon may use estuaries for several months. Chinook salmon have been documented to rear in estuaries for up to 189 days (Boateng and Assoc. 1999). Juvenile coho and chinook salmon in the Salmon River have been observed in the estuary from February through July. In the Neskowin Basin, tidal influence extends several hundred meters upstream of the Hawk Creek confluence (Boateng and Assoc. 1999). The proposed action area likely functions as an important estuarine rearing area in a system that has limited estuarine habitat.

Neskowin is a small coastal town of approximately 500 year-round residents located 37 miles south of Tillamook, Oregon. Neither Neskowin Creek nor Hawk Creek appear on the Oregon Department of Environmental Quality (ODEQ) 303(d) List of Water Quality Limited Water Bodies (ODEQ 2001). However, in the late 1970's Hawk Creek was declared a health hazard due to high fecal coliform levels (Boateng and Assoc. 1999). A wastewater treatment plant was constructed to serve the community in 1995, which is capable of discharging up to 250,000 gallons per day to Hawk Creek. Furthermore, golf courses on Hawk Creek and Meadow Creek use herbicides and fertilizers, which likely enter the creeks. The golf course at Meadow Creek (Neskowin Beach Golf Course) is typically flooded during the winter.

The Neskowin Marsh located at the headwaters of Meadow Creek, within the Hawk Creek watershed, has been identified as an important overwintering habitat for coho salmon. In 1999, a netting survey in the marsh caught numerous coho salmon (R. Lowe, USFWS, personal communications via telephone with R. Markle, March 20, 2001). Recently, the U.S. Fish and Wildlife Service has begun purchasing land within the marsh for inclusion in the Nestucca Bay National Wildlife Refuge. By the end of April 2001, approximately 180 acres will have been purchased.

5. ANALYSIS OF EFFECTS

5.1 Effects of Proposed Actions

Rivers and streams are dynamic systems that perpetually alter their courses in response to multiple physical parameters. Roads, residences and other structures constructed along waterways are subject to flooding and undercutting as a result of these natural changes in stream course. Structural embankment hardening has been a typical means of protection for structures located along waterways. Impacts to waterways from revetment installation are simplification of stream channels, alteration of hydraulic processes, and prevention of natural channel adjustments (Spence *et al.* 1996). Moreover, embankment hardening may shift the erosion point either upstream or downstream of the subject site and contribute to stream velocity acceleration. As erosive forces impact different locations and bank hardening occurs in response, the river eventually attains a continuous fixed alignment lacking habitat complexity (COE 1977).

Fish habitat is enhanced by the diversity of habitat at the land-water interface and adjacent bank (COE 1977). Streamside vegetation provides shade that assists in maintaining cool water temperatures. Overhanging branches provide cover from predators. Organisms that fall from overhanging branches may provide prey for fish. Immersed vegetation, logs, and root wads provide points of attachment for aquatic prey organisms, shelter from swift currents during high flow events, and retain bed load materials.

The most desirable method of bank protection is revegetation. However, revegetation alone can seldom stabilize banks steeper than 3:1 (vertical:horizontal) or areas of high velocity (COE 1977). Although biologically less desirable, fixed structures provide the most reliable means of bank stability. The use of structural measures should be a last resort. Combining structural measures (i.e. sloped riprap or mechanically stabilized earth walls) and vegetation is preferable to an unvegetated structural solution. The least preferable alternative is a vertical bulkhead (COE 1977).

The proposed action is replacement of 495 feet of previously disturbed stream bank with a vegetated rock slope. All work is proposed to occur from the top of bank. Toe trench excavation and rock placed at the toe may occur in the wet. If excavation occurs in the wet, sediment can be expected to become suspended and transported upstream or downstream, depending on tide cycle. Furthermore, fill materials placed at the base of the existing bank and soils exposed while pulling back the bank could be carried into the creeks during a rain event. An increase in turbidity could impact fish and filter-feeding macro-invertebrates upstream and downstream of the work site. At moderate levels, turbidity has the potential to adversely affect primary and secondary productivity; at higher levels, turbidity may interfere with feeding and may injure and even kill both juvenile and adult fish (Spence *et al.* 1996, Berg and Northcote 1985).

To minimize the potential for stream turbidity and direct impacts to fish, work would occur during the summer of 2001 (July 1 to September 15). During this period, creek flows are typically low, fish presence is reduced, and rainfall is minimal. Low flows would allow a majority of the work to occur in the dry, thereby reducing indirect (turbidity) and direct impacts to fish. Fish presence is minimal with

rearing juveniles potentially present, but no adult spawning or egg incubation occurring. The low probability of rainfall reduces the likelihood that sediment would be transported into the river. Based on data provided by the Western Regional Climate Center (2001) for Otis, Oregon, average rainfall during the work period represents 5.7 percent of the annual with less than a 10 percent probability of receiving 0.5 inches of rainfall on any given day. The precipitation probability increases greatly after mid-September, as does the potential presence of returning adult coho salmon. Otis is located approximately 10 miles south of the project site.

As with all construction activities, there is potential for accidental release of fuel, oil, and other contaminants to the waterway. To minimize this potential, no equipment would enter below the break in bank or the ordinary high water elevation. All equipment would work from above the bankline. Best Management Practices (BMPs) required by the Corps and/or the State of Oregon would further minimize the potential for accidental release of hazardous materials.

5.2. Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features of designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. The proposed action area would occur within designated critical habitat for OC coho salmon.

The presence of the Neskowin Shores, Neskowin Resorts, Proposal Rock Condominiums and other bank development in the area affects critical habitat in the long-term by restricting natural channel forming processes, altering stream hydrology, reducing riparian vegetation, increasing stream temperature, and reducing allochthonous input. In addition, Peters *et al.* (1998) found that densities of juvenile coho salmon were generally reduced at riprapped sites when compared to areas containing large woody debris or undercut banks. The salal and evergreen huckleberry proposed for planting within and upslope of the riprap may provide limited allochthonous input in the long-term, but these species will not provide significant shade or cover to fish. Salal planted along the top of slope may eventually provide a source for colonization of the embankment, but salal lacks the deep roots necessary to provide significant soil structure. Plantings are likely to constitute only a marginal improvement over the existing condition.

Short-term impacts resulting from the proposed action could occur from turbidity and debris contribution to the waterway during construction activities and storm events during construction. These effects would be largely ameliorated by project timing (i.e., dry season) as described above in *Effects of Proposed Action*.

While the proposed project will re-establish a hardened bank and continue to limit lateral channel movement, the existing situation does not allow implementation of deformable bank alternatives. Structures are located approximately 5 to 25 feet from the top of bank on fill material and restoration of habitat function is not a realistic option without structure removal. However, since a hardened embankment has existed since the 1970's, the proposed action represents a no net loss in habitat function.

5.3. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as those effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities are being (or have been) reviewed through separate section 7 consultation processes. Therefore, these actions are not considered cumulative to the proposed action.

NMFS is not aware of any specific future non-Federal activities within the action area that would cause greater impacts to listed species than presently occurs. NMFS assumes that future private and state actions will continue at similar intensities as in recent years. The wastewater treatment facility and the local golf courses will continue to discharge contaminants into the Hawk Creek system above natural background levels. Continued local development will continue to put pressure on remaining coho salmon habitat. However, efforts by the U.S. Fish and Wildlife Service to protect and restore Neskowin Marsh will have an important and positive role in preserving some habitat in the system.

6. CONCLUSION

After reviewing the current status of OC coho salmon, the environmental baseline for the action area, the effects of the proposed revetment reconstruction action and the cumulative effects, NMFS has determined that the joint Neskowin Shores, Neskowin Resorts, and Proposal Rock Condominiums Revetment Reconstruction Project, as proposed, is not likely to jeopardize the continued existence of the OC coho salmon, and is not likely to destroy or adversely modify designated critical habitat. This finding is based, in part, on incorporation of best management practices (BMPs) into the proposed project design.

7. CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are *discretionary* measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information.

NMFS has concerns that plantings within the 7-foot thick rock embankment may fail. To maximize planting success, NMFS recommends that plantings be conducted in consultation with a botanist experienced in estuarine bank restoration. Achievement of planting success is highly dependent upon the methodology employed during planting. Furthermore, depending on the timing that planting occurs, it is anticipated that irrigation of plantings during the initial dry season may be necessary.

8. REINITIATION OF CONSULTATION

This concludes formal consultation on these actions in accordance with 50 CFR 402.14(b)(1).

Reinitiation of consultation is required: (1) If the action is modified in a way that causes an effect on the listed species that was not previously considered in the biological assessment and this Opinion; (2) new information or project monitoring reveals effects of the action that may affect the listed species in a way not previously considered; or (3) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16).

9. INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered species and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined by NMFS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, and sheltering. Harass is defined by NMFS as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the term and conditions of this Incidental Take Statement.

9.1. Amount or Extent of Take

NMFS anticipates that the proposed action covered by this Opinion has more than a negligible likelihood of incidental take of juvenile OC coho salmon resulting from the long-term removal of potential natural rearing habitat due to the use of riprap. Effects of actions such as these are largely unquantifiable in the short term. The effects of these activities on population levels are also largely unquantifiable and not expected to be measurable in the long term.

Therefore, even though NMFS expects some low level of non-lethal incidental take to occur due to the action covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as this, NMFS designates the expected level of take in terms of the extent of take allowed. Therefore, NMFS limits the area of allowable incidental take during construction to the distance from the action site downstream to the Pacific Ocean and 500 feet upstream due to high tide events. Incidental take occurring beyond these areas is not authorized by this consultation.

9.2. Reasonable and Prudent Measures

NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of the above species. Minimizing the amount and extent of take is essential to avoid jeopardy to the listed species.

1. Minimize the likelihood of incidental take from construction activities in or near watercourses by implementing pollution and erosion control measures.
2. Minimize the likelihood of incidental take associated with impacts to riparian and in-stream habitats by avoiding or replacing lost riparian and in-stream functions.
3. Minimize the likelihood of incidental take associated with in-stream work by restricting work to recommended in-water work periods.
4. Monitor the effectiveness of the proposed conservation measures in minimizing incidental take and report to NMFS.

9.3. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To Implement Reasonable and Prudent Measure #1, above, the Corps shall ensure that:
 - a. The Contractor shall develop an adequate, site-specific Erosion and Sediment Control (ESCP) and Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. The PCP shall include the following:
 - i. A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for contractor's operations related to disposal sites, borrow pits operations, haul roads, equipment storage sites, fueling operations and staging areas.
 - ii. Identify hazardous products or materials to be used. Include how they will be handled, monitored, inventoried, and stored.
 - iii. Provide a spill containment and control plan that includes: Notification procedures; specific clean up and disposal instructions for different products; quick response containment and clean up measures which will be available on site; proposed methods for disposal of spilled materials; and employee training for spill containment.
 - b. Temporary erosion and sediment controls shall be used on all exposed slopes during any hiatus in work exceeding seven days.

- c. Permanently stabilize exposed soil surfaces at finished grade immediately upon completion of disturbance. Permanent stabilization shall include grass seeding and mulching. Jute matting may also be necessary depending on site conditions.
 - d. Material removed during excavation shall only be placed in locations where it cannot enter sensitive aquatic resources. Conservation of topsoil (removal, storage and reuse) shall be employed.
 - e. All equipment shall work from above the bankline and shall not enter below the break in bank or mean high-high water elevation.
 - f. No pollutants of any kind (i.e., petroleum products, green concrete, etc...) shall come in contact with the area below the mean high-high water elevation.
 - g. All equipment shall be fueled and cleaned off-site in an appropriate upland area more than 150 feet from any waterway.
 - h. No *surface* application of fertilizer shall be used within 50 feet of any aquatic resource as part of this permitted action.
 - i. No herbicide or pesticide use shall occur as part of this permitted action.
2. To implement Reasonable and Prudent Measure #2, above, the Corps shall ensure that:
- a. Disturbed soils shall be seeded (see item "b" in section above).
 - b. Native vegetation shall be planted within the riprap slope.
 - c. Native vegetation shall be planted at the top of bank. Plant vegetation from the top of the streambank to a point approximately 5 feet inland along the entire length of the disturbed bank.
 - d. Plantings along the top of bank shall achieve an 80 percent survival (by area) after 3 years.
 - e. All plantings shall occur prior to April 15, 2002.
3. To implement Reasonable and Prudent Measure #3, above, the Corps shall ensure that:
- a. The applicant shall contact ODFW prior to commencing any work on-site, so that a meeting between ODFW and the contractor/engineer to discuss project plans and scheduling may be arranged at ODFW's discretion.

- b. All work shall be completed during the period of July 1 to September 15. No work shall take place outside this period without prior written authorization from the Corps (in consultation with ODFW and NMFS).
 - c. Alteration or disturbance of the stream banks and existing riparian vegetation shall be minimized.
 - d. Rock shall be individually placed in such a manner as to produce an *irregularly* contoured face to provide velocity disruption. No end dumping shall be allowed.
 - e. Rock placement shall not encroach on the existing channel (i.e., shall not extend beyond the existing toe of slope). Banks must be pulled back to achieve finished 1.5:1 (horizontal to vertical) slope.
4. To Implement Reasonable and Prudent Measure #4, above, the Corps shall ensure that:
- a. Post-construction monitoring reports are provided to NMFS describing the success of conservation measures, confirmation of as-builts, and documentation of planting success. These reports will be submitted as outlined below.
 - b. *Construction Report*. The report on the conservation measures and as-built component of monitoring will be provided by December 31, 2001, and include a description of:
 - i. Specific methods actually used to minimize turbidity;
 - ii. Stream conditions prior to and following any wet excavation;
 - iii. Extent of turbidity plume, in terms of distance upstream and downstream from project site;
 - iv. Any observed injury and/or mortality of fish resulting from project activities; and
 - v. Verify the finished grade and elevations were constructed as designed, including use of irregular contours. The finished embankment toe placement shall be confirmed by tying it back to a pre-existing, stable, and measurable landmark.
 - c. *Planting Report*. Following the completion of plantings, annually provide NMFS with a report by December 31 describing the success of plantings required under Reasonable and Prudent Measure #2. The report should focus on actions taken to ensure that plantings were done correctly and success at meeting the objective of 80 percent or higher survival rate after three years, as well as indicate any replantings completed during the preceding 12-month period. The report shall include photo

documentation. Once 80 percent or greater survival has been documented for three consecutive years, this reporting requirement may be discontinued.

- d. Monitoring reports shall be submitted to:

National Marine Fisheries Service
Attn: Robert Markle
525 NE Oregon Street, #500
Portland, Oregon 97232-2778

Reference: OSB2000-0335

- e. If a dead, sick or injured Oregon Coast coho salmon is located, immediate notification must be made to NMFS (R. Markle, 503-230-5419; or S. Springer, 360-418-4246), or ODFW (Chris Knutsen, 503-842-2741). Care will be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured species or preservation of biological material from a dead animal, the finder has the responsibility to carry out instruction provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- f. Post-construction access by NMFS and ODFW shall be provided with prior notification to further assess impacts of this activity on fishery resources for a period of 5 years from completion of the action.

10. ESSENTIAL FISH HABITAT CONSULTATION

10.1 Introduction

The objective of the EFH consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse impacts to EFH resulting from the proposed action. The Corps did not provide an EFH assessment for this proposed action; however, based on the biological assessment provided for the ESA consultation, NMFS concludes that the proposed action will adversely affect groundfish, coastal pelagic species, and Pacific salmon EFH. The effects are likely to be within the range of effects considered in the ESA portion of this consultation.

10.2. Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NMFS on activities that may adversely affect EFH.

EFH means “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (MSA §3). The Pacific Fisheries Management Council (Council) has designated EFH for federally-managed groundfish (PFMC 1998a), coastal pelagic (PFMC 1998b), and Pacific salmon (PFMC 1999) fisheries.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

The consultation requirements of section 305(b) of the MSA (16 U.S.C. 1855(b)) provide that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NMFS shall provide conservation recommendations for any Federal or State activity that may adversely affect EFH;
- Federal agencies shall, within 30 days after receiving conservation recommendations from NMFS, provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations no less than 10 days prior to granting final authorization for the subject action.

10.3. Identification of Essential Fish Habitat

Groundfish and coastal pelagic EFH extend from tidal submerged environments within Washington, Oregon, and California offshore to the exclusive economic zone limit (200 miles) (PFMC 1998a; PFMC 1998b).

A description and identification of EFH for salmon is found in Appendix A of Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). The EFH includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon in Washington, Oregon, Idaho, and California, except above the impassable barriers identified by the Council (PFMC 1999). Chief Joseph Dam, Dworshak Dam, and the Hells Canyon Complex (Hells Canyon, Oxbow, and Brownlee Dams) are among the listed man-made barriers that represent the upstream extent of the Pacific salmon fishery EFH. Salmon EFH excludes areas upstream of longstanding naturally impassable barriers (i.e., natural waterfalls in existence for several hundred years). In the estuarine and marine areas, proposed designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (200 miles) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border (PFMC 1999).

10.4. Proposed Actions

The proposed action is detailed above in *Section 2*. The action area encompasses the area immediately associated with the subject action, as well as points upstream and downstream that may experience turbidity.

10.5. Effects of the Proposed Action

NMFS concludes that the effects of this project on designated EFH are likely to be within the range of effects considered in the Endangered Species Act portion of this consultation, and finds that the proposed joint Neskowin Shores, Neskowin Resorts, and Proposal Rock Condominiums Revetment Reconstruction Project will adversely affect EFH designated for groundfish, coastal pelagic fish, and Pacific salmon (chinook and coho).

10.6. Conclusion

NMFS believes that the proposed action will adversely affect designated EFH for groundfish, coastal pelagic, and Pacific salmon (chinook and coho).

10.7. EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NMFS is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures that the Corps included as part of the proposed action are adequate to minimize the adverse impacts from this project to designated EFH for groundfish, coastal pelagics, and Pacific salmon (coho and chinook). It is NMFS' understanding that the Corps intends to implement the proposed activity with these built-in conservation measures that minimize potential adverse effects. Consequently, NMFS has no additional conservation recommendations to make at this time. Furthermore, the non-discretionary reasonable and prudent measures and terms and conditions outlined above in Section 9 are applicable to designated EFH.

10.8. Statutory Requirements

The MSA and Federal regulation (50 CFR Section 600.920) require Federal action agencies to provide a written response to EFH Conservation Recommendations within 30 days of receipt of this document. However, since NMFS did not provide conservation recommendations for this action, a written response to this consultation is not necessary.

10.9. Consultation Renewal

The Corps must reinitiate EFH consultation with NMFS if the action is substantially revised in a way that may adversely affect EFH or new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920).

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